

INTERNATIONAL SEARCH REPORT

IB2004/002994

A. CLASSIFICATION OF SUBJECT MATTER
 IPC 7 H03K19/086 H03K19/21 H03K3/2885

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
 IPC 7 H03K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 01/18962 A (KIMURA HIROYUKI ; LUCENT TECHNOLOGIES INC (US)) 15 March 2001 (2001-03-15) figure 4	1-4,9,10
X	EP 0 798 854 A (NIPPON ELECTRIC CO) 1 October 1997 (1997-10-01) column 8, line 6 - column 11, line 8; figure 3	1-4,9

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
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- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

& document member of the same patent family

Date of the actual completion of the international search

5 January 2005

Date of mailing of the international search report

14/01/2005

Name and mailing address of the ISA

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	CAMPBELL P M ET AL: "A very-wide bandwidth digital VCO implemented in GaAs HBTs using frequency multiplication and division" GALLIUM ARSENIDE INTEGRATED CIRCUIT (GAAS IC) SYMPOSIUM, 1995. TECHNICAL DIGEST 1995., 17TH ANNUAL IEEE SAN DIEGO, CA, USA 29 OCT.-1 NOV. 1995, NEW YORK, NY, USA, IEEE, US, 29 October 1995 (1995-10-29), pages 311-314, XP010196783 ISBN: 0-7803-2966-X figure 4	1-4
A	US 5 828 237 A (KEATING PIERCE V) 27 October 1998 (1998-10-27) figure 3	1

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Patent document cited in search report		Publication date		Patent family member(s)	Publication date
WO 0118962	A	15-03-2001	JP WO	2004186710 A 0118962 A1	02-07-2004 15-03-2001
EP 0798854	A	01-10-1997	JP JP US EP	3047808 B2 9266435 A 5844437 A 0798854 A2	05-06-2000 07-10-1997 01-12-1998 01-10-1997
US 5828237	A	27-10-1998	NONE		